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EXAMINER

RAO, ANAND SHASHIKANT

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**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Application Number: 09/998,361
Filing Date: November 29, 2001
Appellant(s): VAN DER SCHAAAR ET AL.

MAILED

MAR 13 2006

Technology Center 2600

Paul A. Schwartz (#37,577)
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed 12/9/2005 appealing from the Office action mailed on 6/9/05.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments After Final

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

No evidence is relied upon by the examiner in the rejection of the claims under appeal.

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

I. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the

Art Unit: 2613

reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

Claims 1, 2, 6-7, and 11-12 are rejected under 35 U.S.C. 102(e) as being anticipated by Hamanaka (US Patent: 6,603,883).

Hamanaka teaches of decoding a video signal including a base layer stream and a plurality of enhancement layer streams (Hamanaka: figure 7), comprising: decoding said base layer stream to produce base layer video frames (Hamanaka: column 7, lines 17-37); decoding a first least one of said first enhancement layer streams to produce quality enhanced video frames (Note: SNR enhancement layer restructure block); combining said base layer video combining said base layer video frames and at least portions of said quality enhanced video frames to produce a first video frame output (Hamanaka: column 8, lines 20-25); upscaling said first video frame output (Hamanaka: column 8, lines 25-31); decoding a second one of said enhancement layer streams to produce spatially enhanced video frames (Hamanaka: column 8, lines 5-20); combining said spatially enhanced video frames and said upscaled first video frame output to produce a second output (Hamanaka: column 6, lines 55-67; column 7, lines 1-7; column 8, lines 32-43), as in claims 1, 6, and 11.

Regarding claims 2, 7, and 12, Hamanaka teaches of decoding a third one of said enhancement layers to produce temporally enhanced video frames; and combining said temporally enhanced video frames and said spatially enhanced video frames to produce a third video frame output (Hamanaka: figure 11- shows the temporal and spatial enhancement layer blocks being inputted to the selector where they can be combined or multiplexed; figures 10 and 11; column 11, lines 23-54), as in the claims.

II. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 3-5, 7-9, and 13-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hamanaka.

Hamanaka discloses a majority of the limitations of 3-4, 8-9, and 13-14, as has been discussed above, however, Hamanaka does not explicitly teach of producing motion compensated video frames, as in the claims. Hamanaka does, however, mention that the invention complies with MPEG standards (Hamanaka: column 1, lines 10-45), and in particular mentions the fact that the data would input in an MPEG-2 bitstream for the decoders. It would have been obvious to one of ordinary skill in the art at the time of the invention to give the invention the ability to produce motion compensated video frames in order take full advantage of temporally scalability features of the Hamanaka reference. The Hamanaka reference, now modified to incorporate temporal scalability through MPEG-2 based motion compensation, has all of the features of claims 3-4, 7-9, and 13-14.

Regarding claims 5, 10, and 15-17, Hamanaka, as modified to incorporate temporal scalability through MPEG-2 based motion compensation, teaches of multiplexing selected ones of said second, third, and fourth outputs to produce a combined output (Hamanaka: figure 11- shown with the selector or multiplexer); means for demultiplexing said plurality of enhancement layers when said enhancement layers are multiplexed transmitted (Hamanaka: figure 7- shows

two enhancement layers being multiplexed together so it further obvious that the signal would have to be demultiplexed; column 11, lines 23-54; figures 7 and 10), as in the claims.

(10) Response to Argument

III. Appellants' arguments with respect to claims 1-17 filed in the Appeal Brief of 12/09/05 have been fully considered but are not persuasive.

The Appellants present two arguments contending the Examiner's rejection of claims 1, 2, 6, 7, 11, and 12 under 35 USC 102(b) as being anticipated by Hamanaka, and one additional argument contending the Examiner's rejections of claims 3-5, 7-9, and 13-17 under 35 USC 103(a) as being unpatentable over Hamanaka. However, after a careful consideration of the arguments presented the Examiner must respectfully disagree and submit to the Board that the rejections are proper and should be sustained for the reasons that follow.

Firstly, after establishing the legal basis for anticipation (Brief of 12/09/05: page 7, lines 19), the Appellants argue that Hamanaka fails to disclose an apparatus for decoding a video signal including a base layer signal and a plurality of enhancement layer signals including "...combining said base layer...to produce a second video frame output as in claims 1, 2, 6, 7, 11 and 12, (Brief of 12/09/05: page 7, lines 10-17) and further points out that the presented citations (Hamanaka: column 6, lines 55-67; column 7, lines 1-7; column 8, lines 20-25, 21-31, and 32-43) only address encoding functions/elements (Brief of 12/09/05: page 7, lines 18-18-24). The Examiner respectfully disagrees. It is noted that the citation for the "...decoding a first least one of said first enhancement layer streams to produce quality enhanced video frames..." limitation of independent claim 1 (second limitation) is clearly associated with the **SNR enhancement layer restructure block** contained within element 210 and which only appears in figure 11.

Art Unit: 2613

Figure 11 is plainly described as a **decoding embodiment** (Hamanaka: column 11, lines 50-55). Additionally, it is noted that with respect to dependent claims 2, 7, and 12, it is noted that the rejection also address figures 10-11 and a further citation with the reference (Hamanaka: column 11, lines 23-54) which are all directed towards decoders and decoding methods. So the Appellants are clearly erroneous in stipulating that all the citations addressing claim 1 are directed towards encoding, and a simple perusal of the figures for that specifically named element would have established Hamanaka's decoder teaching. However, the Examiner notes that Hamanaka teaches of the discussed base/enhancement layer signal orientation mainly with the discussion of the encoders. That is, even though some citations are directed towards encoding, that is only because the reference concentrates most of its discussion about base/enhancement layer signal orientation on the encoding side, the deconstruction of said signals by decoding is only described as being the exact opposite of the encoding processing (Hamanaka: column 11, lines 40-50). A diligent analysis of the rejection of claim 1 would have lead to figure 11 and would have established the decoder's operation as being the exact opposite of the cited encoding processing of the signals. Accordingly, the Examiner maintains that the limitation is met.

Secondly, the Appellants argue that Hamanaka fails to read upon the "quality enhanced video..." limitation of the claims (Brief of 12/09/05: page 7, lines 25-27; page 8, lines 1-24). The Examiner respectfully disagrees. It is noted that Hamanaka discusses quality in terms of temporal scalability (Hamanaka: column 2, lines 19-25), spatial scalability (Hamanaka: column 1, lines 45-65), and SNR scalability (Hamanaka: column 2, lines 50-64). So even the temporal enhancement according to the reference would read on "quality enhancement" as it presented in

Art Unit: 2613

the claims. Furthermore, it is noted that the citation in question goes towards the "...combining step..." and not necessarily the type of signals being combined. Additionally, it is noted that Hamanaka clearly has quality considerations on the decoding side (Hamanaka: column 12, lines 25-40). Accordingly, the Examiner maintains that the limitation is met.

Lastly, regarding the remarks regarding the modifications to the Hamanaka reference, the Examiner remained unconvinced by the Appellants argument that a *prima facie* case has not been established by the Examiner (Brief of 12/09/05: page 8, lines 24-32; page 9, lines 1-13). The presentation of this argument seems to be boilerplate, since all its does is say what the modification doesn't account for, without mentioning specifics regarding the references' particular teachings. Since the modification was to incorporate temporal scalability through using motion compensation according to the MPEG standards, first one of ordinary skill would have to establish that the reference is familiar with MPEG, which it is (Hamanaka: column 1, lines 15-45; column 3, lines 30-40). The citations describe the reference's knowledge of MPEG-1/2/4 and H.261 standards. Next, one of ordinary skill in the art has to establish whether the reference would suggest motion compensation. The Examiner notes that I, B, P frames are encoded as a part of the temporal scalability function (Hamanaka: column 2, lines 25-32). One of ordinary skill in the art would know that it would obvious to incorporate motion compensation for producing the P and B frames thus expect to produce accurately predicted frames (Hamanaka: column 2, lines 55-60). And lastly, when modified, the Hamanaka teaching would address the broadly recited "motion compensation" limitation as in these claims. It is noted that for instance, the reference recites I, B, and P frames, but these terms don't appear anywhere in the claims. Accordingly, the Examiner asserts that a *prima facie* case of obviousness has been met.

Art Unit: 2613

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

Conclusion

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

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